Appendix D – Species response to herbicides

The following table (D-1) outlines species-specific response to various herbicides. Tables D-2 thru D-5 outline shrub and tree treatment effectiveness/susceptibility by treatment type and herbicide.

For table D-1, absence of a weed from a label does not necessarily mean complete lack of control. Responses of weeds to any of the listed herbicides may be altered by growing conditions, weed populations, type of irrigation, genetic variations of weeds, soil type, pH, organic matter, time of application, and application rate. Ratings may vary from season-to-season and geographic areas within the area.

Table D-1. Species response to herbicides. E = Excellent; G = Good, F = Fair; P = Poor or no control

Species	*2,4-D*	*aminopyralid*	*chlorsulfuron*	*clopyralid*	*dicamba*	*fluroxypyr*	*glyphosate*	*hexazinone*	*imazapic*	*imazapyr*	*metsulfuron methyl*	*picloram*	*sulfometuron methyl*	*triclopyr*
black henbane					E	E								
bull thistle	E			E	E									
canada thistle		G-E		E	F		G				F	E		F
cheatgrass			E				E	E					G	
common burdock	F										E			G
common mullein	F						G				E	F		
common tansy	P				F						E	G		
curveseed butterwort									G		E			
dalmatian toadflax					P				G		F-G	E-G		
diffuse knapweed	F	G-E		G-E	F-G		F				P	E		
dyer's woad	G				F						E	P		
field bindweed	F		P		F		F				F	G	G	
hoary cress	F						F				E	P		
houndstongue	F				G				F		E	G		

Species	*2,4-D*	*aminopyralid*	*chlorsulfuron*	*clopyralid*	*dicamba*	*fluroxypyr*	*glyphosate*	*hexazinone*	*imazapic*	*imazapyr*	*metsulfuron methyl*	*picloram*	*sulfometuron methyl*	*triclopyr*
leafy spurge	F				F		G		G		P	G		
medusahead							E		E					
musk thistle	F	G-E		G-E	F						E	E		
ox-eye daisy				E				E				E	E	
perennial pepperweed							E							
perennial sowthistle	E			F	E									
plumeless thistle	G	G		E	E							E		
purple loosestrife	G						G				G			G
quack grass							G-E	G-E						
Russian knapweed	P	G-E		G	F		P				F	E		
Russian olive					E		F							E
salt cedar					P		F	F		G		P		
scentless chamomile							F							
scotch thistle	F	G		E	F						E	E		
skeletonleaf bursage					E		E							
spotted knapweed	G	G-E		E	G		F	F			P	E		
squarrose knapweed	F	G-E		G	F		P				P	E		
St. Johnswort	G										G	G		P
sulfur cinquefoil	G	G-E			P						E	E		G
yellow toadflax							G				F	G		

Sources: Bussan et al, 2001-2002., Parker 2008, Zandstra et al 2004, and herbicide labels

Shrubs and trees

Herbicide drift onto adjacent desirable plants can be a problem when applying herbicides. Apply only when there is little or no hazard from spray drift. Do not spray when wind is blowing toward desirable plants that are near enough to be injured. When treating trees and brush, use a low pressure coarse spray and treat all sides of the plant.

The following susceptibility charts[1] are to be used only as a guide when planning herbicide treatments. Consult research reports, product labels, and knowledgeable personnel for additional information.

Table D-2. Label clearances for herbicides

Herbicide*	Type of Application					
	Foliar	Soil	Frill	Stump	Basal	Inject
2,4-d	x		x	x	x	x
dicamba	x		x	x	x	
glyphosate	x		x	x		x
hexazinone	x	x				
imazapyr	x		x	x	x	
metsulfuron	x	x				
picloram	x		x	x		x
triclopyr	x		x	x	x	x

*includes only those herbicides typically used for shrub and tree treatment

Table D-3. Susceptibility to cut surface, injection, and stump treatments. G=Good control; F=Fair control, likely to need retreatment; P=Poor control

Plant	Herbicide				
	2,4-D	Dicamba	Triclopyr	Imazapyr	Glyphosate
alder	G	G	G	G	G
ash	P	F	G	G	G
aspen	F	G	G	G	G
cherry	G-F	G	G	G	G
cottonwood	G	G	G	G	G
Douglas-fir	P		G		
elm	F	G-F	G-F	G	G
pines	F				
Russian olive	F	F	F	G	G
saltcedar		G	G	G	G
willow	F	G	G	G	F

[1] Washington State University Cooperative Extension. 1995. http://cru.cahe.wsu.edu/CEPublications/eb1551/eb1551.html

Table D-4. Susceptibility to foliage treatments. G=Good control; F=Fair control, likely to need retreatment; P=Poor control

Plant	Herbicide					
	2,4-D	Dicamba	Glyphosate	Triclopyr	Imazapyr	Metsulfuron
alder	G	G	G	G	G	
ash	P	G	G	F		G
aspen	F-P	F	G	G	G	G
chokecherry	G	F-P	G	G		
cottonwood	F-P	G	G	G	G	G
Douglas-fir	F-P	G	G-P	G-P	G-F	
elm	F-P	F-P	G	G-F	G	G
pine	G	G	P	G	F	
wild rose		G	G	G		G
Russian-olive	F	G	G	F	G	
sagebrush	G	G	F	G		
snowberry	P	P	G	F	G	G
sumac	G-F	G-F	G	G	G	
willow	G-P	G-P	G-F	G-P	G	

Table D-5. Susceptibility to basal bark treatment. G=Good control; F=Fair control, likely to need retreatment; P=Poor control

Plant	Herbicide			
	2,4-D	Triclopyr	Hexazinone	Picloram
alder	G-F	G	G	G
ash	P		G	
aspen	G-F		G	G
chokecherry	G-F	G		
cottonwood	G	G		
Douglas-fir			P	G
elderberry	G-F	G		
elm	G-F	G-F	G	
pine			P	G
wild rose			G	
Russian-olive			G	
sagebrush	G			
snowberry	F-P	F-P		
sumac	P		G	G
willow	G-F	G-F	G	